

Docket No.: 65933-085

## IN THE UNITED TATES PATENT AND TRADEMARK OFFICE

In re Application of

Atsuhiro YAMASHITA

Application No.: 10/813,630

Filed: March 31, 2004

DISPLAY ELEMENT AND DISPLAY DEVICE

Customer Number: 20277

Confirmation Number: 3848

Group Art Unit: 2873

Examiner:

# REQUEST FOR CORRECTED FILING RECEIPT

Mail Stop OFR Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

For:

Attached is a copy of the Updated Filing Receipt received from the U.S. Patent and Trademark Office in the above-referenced application. It is noted that the Independent and Total Claims are incorrect. Attached is a copy of the Claims, which evidences that the Total Claims should read: 20, and the Independent Claims should read: 3. It is requested that a corrected filing receipt be issued.

Respectfully submitted,

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**FILING OR 371** DRAWINGS TOT CLMS FIL FEE REC'D ATTY.DOCKET NO IND CLMS **ART UNIT** APPL NO. (c) DATE 14 10/813.630 03/31/2004 2873 900 65933-085

**CONFIRMATION NO. 3848** 

**UPDATED FILING RECEIPT** 

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Date Mailed: 08/31/2004

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Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

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**Power of Attorney:** 

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Domestic Priority data as claimed by applicant

Foreign Applications

JAPAN JP2003-097055 03/31/2003 JAPAN JP2003-097056 03/31/2003

If Required, Foreign Filing License Granted: 06/15/2004

The number of your priority application, to be used for filing abroad under the Paris Convention is, US10/813,630

Projected Publication Date: 12/09/2004

Non-Publication Request: No

Early Publication Request: No

Display element and display device

**Preliminary Class** 

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#### WHAT IS CLAIMED IS:

1. A digital-driven display element comprising:

a light emitting element which emits light when an electric current is supplied thereto;

a driving transistor which controls the supply of the electric current to the light emitting element and is operated in a linear region; and

an electric current adjustment element which is connected to the light emitting element and the driving transistor in series, to adjust the electric current flowing through the light emitting element.

- 2. The display element according to claim 1, wherein the electric current adjustment element is a transistor.
- 3. The display element according to claim 2, wherein

a signal same as that inputted to a gate electrode of the driving transistor is inputted to a gate electrode of the transistor.

4. The display element according to claim 2, wherein

a control signal for variably controlling the electric current flowing through the light emitting element is inputted to a gate electrode of the transistor.

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- 5. A display device comprising the display elements according to claim 1 arranged in matrix
- 6. A display device comprising the display elements according to claim 2 arranged in matrix
- 7. A display device comprising the display elements according to claim 3 arranged in matrix
- 8. A display device comprising the display elements according to claim 4 arranged in matrix
- 9. A digital-driven display device comprising:

a plurality of pixel circuits, each of the plurality of pixel circuits comprising

a light emitting element which emits light when an electric current is supplied thereto, and

a driving transistor which controls the supply of the electric current to the light emitting element and is operated in a linear region; and

a power source line through which the electric current is supplied to the light emitting element of each pixel circuit,

the power source line branching from a first power source on a side of high electric potential to each pixel circuit at a first node, and converging from each pixel

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circuit at a second node, and then being connected to a second power source on a side of low electric potential, and

an electric current adjustment circuit which adjusts the electric current flowing through the light emitting element being disposed between the first node and the first power source.

### 10. The display device according to claim 9, wherein

when the electric current at the first node decreases, the electric current adjustment circuit increases the electric potential of the first node, in order to move an operating point of the driving transistor in a direction of increasing the electric current.

#### 11. A digital-driven display device comprising:

a plurality of pixel circuits, each of the plurality of pixel circuits comprising

a light emitting element which emits light when an electric current is supplied thereto, and

a driving transistor which controls the supply of the electric current to the light emitting element and is operated in a linear region; and

a power source line through which the electric current is supplied to the light emitting element of each pixel circuit,

the power source line branching from a first power

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source on a side of high electric potential to each pixel circuit at a first node, and converging from each pixel circuit at a second node, and then being connected to a second power source on a side of low electric potential, and

an electric current adjustment circuit which adjusts the electric current flowing through the light emitting element being disposed between the second node and the second power source.

- 12. The display device according to claim 11, wherein when the electric current at the second node decreases, the electric current adjustment circuit decreases the electric potential of the second node, in order to move an operating point of the driving transistor in a direction of increasing the electric current.
- 13. The display device according to claim 9, wherein the electric current adjustment circuit is a transistor.
- 14. The display device according to claim 10, wherein the electric current adjustment circuit is a transistor.
- 15. The display device according to claim 11, wherein the electric current adjustment circuit is a transistor.
- 16. The display device according to claim 12, wherein

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the electric current adjustment circuit is a transistor.

- 17. The display device according to claim 9, wherein the electric current adjustment circuit is a resistor element.
- 18. The display device according to claim 10, wherein the electric current adjustment circuit is a resistor element.
- 19. The display device according to claim 11, wherein the electric current adjustment circuit is a resistor element.
- 20. The display device according to claim 12, wherein the electric current adjustment circuit is a resistor element.